Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A valve plate for a hydraulic machine, comprising:

first and second ports, each having a shape that describes a portion of a circle, formed in the valve plate and positioned such that the first and second ports define inner and outer circumferences of an annular region of the valve plate;

a first pressure relief port located in the valve plate substantially outside of the annular region at a top-dead-center position; and

a second pressure relief port located in the valve plate substantially outside of the annular region at a bottom-dead-center position, the second pressure relief port being in fluid communication with the first pressure relief port.

2. (Original) The valve plate of claim 1 wherein the first and second ports are configured to be selectively coupled to high- and low-pressure fluid sources or low- and high-pressure fluid sources respectively.

3. (Cancelled)

4. (Previously Presented) A hydraulic machine, comprising:

a valve plate;

first and second kidney ports provided in a surface of the valve plate;

a cylinder barrel having a barrel face, the cylinder barrel being rotatably coupled to the valve plate such that the barrel face is in face to face contact with the surface of the valve plate;

an even numbered plurality of cylinders formed in the cylinder barrel;

a plurality of cylinder ports formed in the barrel face of the cylinder barrel such that as the barrel rotates, each cylinder port is coupled to the first and second kidney ports, sequentially, each cylinder port being in fluid contact with respective cylinders of the cylinder barrel;

a first pressure relief port formed in the surface of the valve plate such that, as each of the cylinder ports reaches a top-dead-center of rotation, the respective cylinder port is coupled to the first pressure relief port;

a second pressure relief port formed in the surface of the valve plate such that, as each of the cylinder ports reaches a bottom-dead-center of rotation, the respective cylinder port is coupled to the second pressure relief port, the first and second pressure relief ports and each of the plurality of cylinder ports being shaped and positioned such that, during rotation of the cylinder barrel, each cylinder port partially crosses top- or bottom-dead-center before being coupled to the respective pressure relief port; and

a bore extending between the first and second pressure relief ports to place the first and second pressure relief ports in fluid communication with each other.

5. (Original) The machine of claim 4 wherein each of the plurality of cylinder ports includes a vent notch positioned such that when the respective cylinder port is at the top-dead-center or bottom-dead-center of rotation, the vent notch is coupled to the first or second pressure relief port, respectively.

6. (Original) The machine of claim 5 wherein the valve plate and cylinder barrel are configured such that, as the cylinder barrel rotates over the valve plate, each cylinder port, in turn, breaks fluid communication with the first kidney port and enters fluid communication with the first pressure relief port substantially simultaneously, while an opposing cylinder port breaks fluid communication with the second kidney port and enters fluid communication with the second pressure relief port, also substantially simultaneously.

7. (Original) The machine of claim 4, further comprising a plurality of vent apertures formed in the barrel face, each aperture being in fluid communication with a respective

one of the plurality of cylinder ports and positioned in the barrel face such that when each cylinder port is at the top-dead-center or bottom-dead-center of rotation, the respective vent aperture is coupled to the first or second pressure relief port, respectively.

8. (Original) The machine of claim 4, further comprising:

a plurality of pistons, each having a first end positioned within a respective one of the plurality of cylinders; and

a thrust plate having a plurality of sockets, and wherein a second end of each of the plurality of pistons is positioned in a respective one of the plurality of sockets.

9. (Original) The machine of claim 8, further comprising:

a first axis, around which the cylinder barrel is configured to rotate; and

a second axis, around which the thrust plate is configured to rotate, the first and second axes being configured to rotate in a plane around a common point, with respect to each other.

10. (Cancelled)

11. (Previously Presented) A hydraulic machine, comprising:

a valve plate having a valve surface, and further having first and second fluid ports configured to be coupled to first and second pressurized fluid sources;

a cylinder barrel rotatably coupled to the valve plate over the valve surface, the barrel having a plurality of cylinders formed in a circular arrangement in the barrel, each cylinder having a cylinder port configured to be in fluid contact, alternately, with the first and second fluid ports as the barrel rotates thereover; and

means for equalizing fluid pressure in pairs of the plurality of cylinders on opposite sides of the circular arrangement, beginning only after the cylinder ports of each pair of cylinders begin to cross top-dead-center and bottom-dead-center of rotation, respectively.

12. (Original) The hydraulic machine of claim 11 wherein the number of cylinders is an even number.

13. (Previously Presented) A method, comprising:

rotating a barrel of a hydraulic machine, the barrel having a plurality of cylinders formed therein, each having a respective cylinder port; and

placing a first cylinder, after its respective cylinder port begins to cross top-dead-center of rotation, in fluid communication with a second cylinder, after its respective cylinder port begins to cross bottom-dead-center of rotation.

14. (Previously Presented) The method of claim 13, further comprising:

further rotating the barrel until third and fourth cylinders reach top- and bottom-dead-center of rotation, respectively; and

placing the third and fourth cylinders in fluid communication with each other.

15. (Previously Presented) The method of claim 13, further comprising:

placing the first cylinder in fluid communication with a first fluid port of a valve plate while placing the second cylinder in fluid communication with a second fluid port of the valve plate; and

breaking fluid communication between the first cylinder port and the first fluid port while breaking fluid communication between the second cylinder port and the second fluid port.

16. (Original) The method of claim 15 wherein the placing the first and second cylinders in fluid communication step, and the breaking fluid communication step are performed substantially simultaneously.

17. (New) The method of claim 13 wherein the placing the first and second cylinders in fluid communication comprises equalizing pressures of the first and second

cylinders to a pressure that is higher than a pressure of a low-pressure fluid supply of the hydraulic machine and lower than a pressure of a high-pressure fluid supply of the machine.